

By Jennifer Courduff

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# One Size Never Fits All



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## Tech Integration for Special Needs

**W**hy is technology so difficult to integrate into special education? If it's so powerful, why isn't it being used to the fullest advantage? After all, technology is capable of unlocking the keys to learning for all students—especially those with special needs.

For more than seven years, Etiwanda School District in California has implemented a districtwide technology integration program that included beginning, intermediate, and advanced professional development training and support for general education teachers. Training included programs such as Intel Teach to the Future and the application of this training for the effective use of Microsoft Office programs in teaching and learning activities. Training also included information about digital storytelling, e-portfolios, using data for differentiation, and integrating emerging technologies, such as interactive whiteboards and student response systems, into instruction. Our teachers attended trainings and integrated technology into general education lessons daily.

As we looked for ways to improve our programs, we came to realize that we didn't offer tech integration training that focused specifically on students with special needs. In response, we implemented a practical technology support plan for teachers working in specialized academic instruction programs. Our vision and subsequent goal was to enable teachers to help students with special needs and challenges through the process of weaving existing technology resources into instructional practices in meaningful ways.

Through the creative and diligent commitment of Etiwanda's specialized academic instruction teachers, our students are now meeting their individualized education program

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(IEP) goals more quickly than ever. Additionally, student performance on district benchmarks are improving because we are helping teachers think creatively about technology in their classrooms.

### Creative Tech Integration

We recognized that formal, stand-alone training does not—and never will—meet the needs of teachers of students who are exceptional. The spectrum of curricular, social, emotional, and physiological needs is much too broad. What teachers really need is to learn to match specific curricular tasks with technology resources that engage students, increase understanding, and enhance learning.

To facilitate this, we are developing a forum that offers choices. We provide teachers with the initial list of curricular areas of need and technology resources that might successfully address that need. We help them make connections between curricular tasks and technology tools and then encourage them to look for nontraditional fixes. In essence, our goal is to create an environment that is engaging and inspiring for teachers, increases student achievement, and addresses student learning goals, strengths, and styles.

We designed our program as a Community of Practice model that allows for a scaffolded learning approach. We provide assistive technolo-

gy (AT) toolkits that include resource binders, Fusion writers, and headset microphones, and we purchase other interactive technology tools for all special education teachers.

### Tiers Not Years

At the beginning of the program, we really believed that three years of training would be enough to successfully affect how teachers integrate technology into learning activities. We learned, however, that it takes a lot longer than three years for teachers to make the transition from knowing how to use technology to actually integrating it into learning tasks.

The complexities of special education, such as student needs, IEP goals, time restraints on teachers, school culture, and administrative support, make integration nearly impossible.

To integrate technology meaningfully, teachers needed individual and group mentoring, collaboration, and support. Because time has to be flexible, we organized our program in tiers instead of years.

**Tier 1.** Teachers participate in hands-on workshop sessions to learn how to use the AT toolkits, Fusion writers, and microphones to engage students, increase content understanding, and meet IEP goals.

**Tier 2.** The focus of training moves to the development of e-portfolios for



Etiwanda School District found that students who struggle with prescriptive writing become highly motivated when encouraged to add artwork that reflects the meaning behind their words. This image, created by fourth grade student Jakob Jourdane, illustrates how the use of technology can help bring a reluctant writer's ideas to life.

student-led conferences. Teachers receive a digital camera, camera case, and memory card to develop e-portfolios with their students. We provide Tier 2 training in a hybrid format, meaning teachers learn in both face-to-face and online environments. Teachers are not only learning the technology but also learning the power of communicating in the online environment.

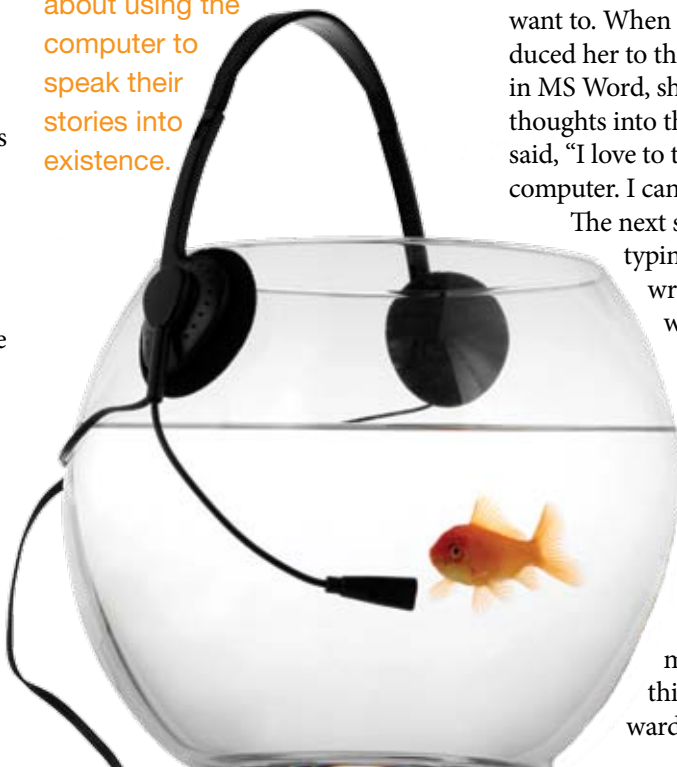
**Tier 3.** Face-to-face support and collaboration will continue, but online collaboration is by far the larger component. Texting, social networking, and other emerging technology trends will slowly replace face-to-face collaboration. In this tier, teachers and students will learn to refine and expand on skills for using e-portfolios, digital storytelling, and emerging technologies, such as student response systems, interactive whiteboards, and dance mats. This is time consuming, but the benefits we are beginning to see in individual lives are simply amazing.

### Real Results

Students who have great difficulty organizing their thoughts and putting them into words are not motivated to write. By using programs such as the speech-to-text feature

in MS Word, word prediction, and text-to-speech programs in the Fusion writers, students' attitudes toward writing have changed. Reluctant writers have become enthusiastic about using the computer to speak their stories into existence. Because of this,

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students read and write daily and are improving their grades and scoring better on district assessments. Some students were able to meet academic growth goals for the first time in their lives!

Adriana was a second grade student who has had a writing disability since kindergarten. She struggled with both the physical aspect of writing and being motivated to write—she just did not want to. When Adriana's teacher introduced her to the speech-to-text feature in MS Word, she learned to speak her thoughts into the computer. Adriana said, "I love to talk my writing into the computer. I can make stories. It's fun."

The next step for Adriana was typing words on the Fusion writer and hearing her words through the text-to-speech feature. For the first time in Adriana's life, she met her writing growth goal: She wrote a sentence. She said, "I love my Fusion. It helps me write the words." Both Adriana's teacher and mother cried in joy at this tremendous step forward in Adriana's life.



The stories go on and on. Shannon was a fifth grader reading at a prekindergarten level. She had trouble decoding and writing, but not creating stories in her head. We decided to introduce Shannon to digitally narrating her stories into the computer using a headset microphone. She used her own narrated recording as a dictation device. This changed everything for Shannon. She was free from the hindrances of spelling, writing, and even typing long enough to free her mind to create—really write. After she wrote the story through digital narration, Shannon was more motivated to go back and write it all down in the traditional sense using her own narration as a guide. Shannon's reading and writing scores went from pre-primer to second grade level in about six months.

Aaron, who is also in the fifth grade, is a very reluctant writer who now uses story starters to create wonderful tales of adventure with himself as the

hero. He says, "I can do anything in my stories. I can be a hero."

Josh, a middle school resource student, had emotional problems and wouldn't present his U.S. president report in front of his class. The pressure of presenting was just too great for him. We found a solution through adding voice narration to his PowerPoint presentation. His teacher worked with him to develop the PowerPoint report. When they finished creating all of the slides, he recorded his presentation through the narration feature in PowerPoint. When the time came to present in front of the class, Josh dressed up as his president and stood in front of the class while the PowerPoint presentation played. The entire class applauded, and it was clear that Josh had not experienced such a high level of success and self-worth in a long time.

From kindergarten through eighth grade, our students are using speech-

to-text and text-to-speech features to create stories, write reports, and even assemble academic portfolios of what they have learned, what they are learning, and what they want to work on in the upcoming year.

While progress comes slowly, the research and application embodied in this approach is a significant step toward developing and supporting effective, sustainable technology integration into learning and teaching practices. More critically, it helps address the vast array of needs found among students who are exceptional. As teachers and educational technologists, is this not our ultimate goal?



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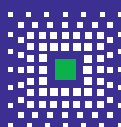
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